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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/090,119	02/28/2002	Eric T. Bovell	3336.1004-000	3603

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EXAMINER

VU, PHUONG T

ART UNIT PAPER NUMBER

2841

DATE MAILED: 01/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/090,119

Applicant(s)

BOVELL, ERIC T.

Examiner

Phuong T. Vu

Art Unit

2841

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 January 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Regarding claims 1 and 11, it is unclear from the claim language if it is the storage devices or the control signal connectors that have "different configurations". It is noted that there is no basis in the specification to support control signal connectors having different configurations.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or
(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

4. Claims 1, 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Yeom et al. (US 5,327,323). Regarding claim 1, the reference discloses a sled module for a

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mass storage device comprising a housing 1, a circuit board 4 mounted to a portion of the housing, the circuit board having an end mounted connector 40 for control signals, a mass storage device H having an enclosure and a control signal connector HC, and spacers (side edge portions of guide 5) positioning the mass storage device within the housing at a position juxtaposed with respect to the circuit board such that the signal connectors on the circuit board and the mass storage device are aligned with one another, the spacers thus permitting the sled module to adapt to mass storage devices with different configurations wherein the mass storage devices that may be adapted to have control signal connectors. It has been held that the recitation that an element is "adapted to" perform a function is not a positive limitation but only requires the ability to so perform.

Regarding claim 5, the mass storage device is a hard disk drive.

Regarding method claims 11-12, one would necessarily perform the recited steps in inserting the mass storage device in the sled module rejected above.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3-4, 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yeom et al. (US 5,327,32). Regarding claim 3, the mass storage device has only one connector, however, it is known in the art to provide mass storage devices with a

separate data interface port and a power supply port. Correspondingly, the circuit board would also then have a data interface connector and a power supply connector. The examiner takes Official Notice.

Regarding claim 4, the spacers position the mass storage device so that its connector mates with the connector of the circuit board. If separate connectors were provided as recited in claim 3, the spacers would necessarily position the mass storage device so that the data interface and power supply ports of the mass storage device mate with the corresponding connectors of the circuit board.

Regarding claim 7, the reference is silent regarding the material composition of the spacers. However, it would have been obvious that the spacers may be formed from plastic.

Similarly, method claim 13 is rejected.

7. Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sherry (US 5,757,617) over Wakita (US 5,488,538). Regarding claim 1, the Sherry reference discloses a sled module for a mass storage device comprising a housing 80, a circuit board 72 mounted to a portion of the housing, the circuit board having an end mounted connector 68 for control signals, a mass storage device 60 having an enclosure and a control signal connector 62. The reference does not teach providing spacers to accommodate different sized mass storage devices, however, Wakita teaches that it is known to provide spacers 20,30 for positioning a mass storage device 3 within a housing 12, the spacers thus permitting the housing to adapt to mass storage devices with different configurations wherein the mass storage devices have control

signals. It would have been obvious to those skilled in the art at the time the invention was made to modify the sled module of Sherry to provide spacers as taught by Wakita to allow the sled module to accommodate mass storage devices with different configurations to expand the functionality of the sled module without incurring the production cost of having to redesign and remake the sled module for each variation of mass storage devices. In such a configuration, the spacers would position the mass storage device within the housing at a position juxtaposed with respect to the circuit board such that the signal connectors on the circuit board and the mass storage device are necessarily aligned with one another as shown in the Sherry reference.

Regarding claim 2, the Sherry reference teaches providing a cover 88. It would have been obvious to those skilled in the art at the time the invention was made that a hole may be provided allowing the mass storage device to protrude through the cover for easy access to the mass storage device.

Regarding claim 3, both references show that the mass storage device has only one connector, however, it is known in the art to provide mass storage devices with a separate data interface port and a power supply port. Correspondingly, the circuit board would also then have a data interface connector and a power supply connector. The examiner takes Official Notice.

Regarding claim 4, the spacers position the mass storage device so that its connector mates with the connector of the circuit board. If separate connectors were provided as recited in claim 3, the spacers would necessarily position the mass storage

device so that the data interface and power supply ports of the mass storage device mate with the corresponding connectors of the circuit board.

Regarding claim 5, both references show that the mass storage device is a hard disk drive.

Regarding claim 6, those skilled in the art would recognize that the above mentioned sled module may accommodate a CD-ROM drive, DVD drive or digital tape drive to further expand its functionality.

Regarding claims 7-8, the reference is silent regarding the material composition of the spacers. However, it would have been obvious that the spacers may be formed from plastic or rubber.

Regarding claims 9-10, it would have been obvious to those skilled in the art at the time the invention was made that the spacers may be made of a flexible, compressible material to provide shock absorption.

Regarding method claims 11-16, one would necessarily perform the recited steps in inserting the mass storage device in the sled module rejected above.

Response to Arguments

8. Applicant's arguments filed January 10, 2003 have been fully considered but they are not persuasive. Regarding Yeom reference, Applicant notes that the form factor of the disk drive is fixed. The guide 5 accommodates the disk drive and fills the space in the housing 1 for securely attaching the disk drive. While it is true that the guide is for accepting the disk drive of a fixed form factor, assuming that claim 1 specifies that the spacers permit the sled module to adapt to mass storage devices with different

configurations (as opposed to control signal connectors with different configurations), the examiner believes that the limitation is still met as "mass storage devices with different configurations" does not necessarily mean that the devices are of different sizes. Devices with different configurations may have varying designs and may still be of the same size. Regarding the alignment of the connectors, the guide receives the disk drive and allows the disk drive to be positioned so that it may be secured in the housing. This configuration would automatically align the connectors.

Regarding the rejection of the claims based on the Sherry and Wakita references, Applicant states that the spacers shown in Wakita are used to fill a space in the lateral sidewalls of the disk drive chassis and are not chosen to adapt the rear connectors of the disk drive to the sled module or other enclosure. Applicant further notes that Wakita does not show rear connectors. The Sherry reference was used to show a known module comprising a housing, circuit board with end mounted connector, and mass storage device with control signal connectors connected to the circuit board. The Wakita reference was cited to show that it is known in the art to use spacers to position a mass storage device in a housing where the mass storage device may have varying sizes. The Wakita reference is relied upon solely for this teaching. It is the examiner's position that in viewing the configuration taught by Sherry, it would have been obvious to those skilled in the art that spacers may be used as taught by Wakita to position mass storage devices having varying sizes to increase the flexibility of the module so the module would not be limited to receiving mass storage devices of the same size. Also this eliminates the need for different modules, where each module is

equipped to accept only mass storage devices of the same size. In such a configuration, it would be obvious to those skilled in the art that the connectors of the mass storage device and the circuit board of the module would necessarily need to be aligned for the module to even function and thus perform its intended task to fulfill its purpose. The fact that Wakita does not teach providing connectors is inconsequential, as the reference was not relied upon for this teaching.

Regarding claim 2, Applicant states that the examiner's reasons for providing a hole in the cover are different from the reasons for placement of the hole in the present device. However, it is noted that in a rejection, it only required to show the claimed structure or to show reasons for providing the claimed structure. The reasons for providing the claimed structure are not required to be the same as Applicant's reasons for providing the structure.

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

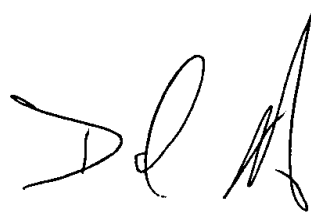
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuong T. Vu whose telephone number is (703) 308-0303. The examiner can normally be reached on Mon. & Tues., 7:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Martin can be reached on (703) 308-3121. The fax phone number for the organization where this application or proceeding is assigned is (703) 746-4341.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

Phuong T. Vu
Patent Examiner
January 20, 2003



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